

CLAIMS

1. A system for determining and/or positioning a digital sensor of dental X-ray apparatus, comprising

- an input and output device for interactive control of the system,
- a first storage area, in which the digital image of the area to be examined, is saved,
- a second storage area, in which at least one template image of the sensor is stored,
- a processing unit, which places the template image of at least one sensor simulatively on the area to be examined of the digital image such that when a real X-ray image is created the area to be examined is depicted completely,
- wherein the processing unit has means for indicating the sensor and the position of the sensor in the digital image.

2. A system as defined in claim 1, characterized by a user interface enabling interactive selection of the template image and/or the area to be examined.

3. A system as defined in any one of claims 1 to 2, characterized in that the user preferably interactively specifies the area to be examined in the digital image, and the processing unit specifies, preferably by iterative simulation, that template image which covers the area to be examined as completely as possible.

4. A system as defined in any one or more of the previous claims, characterized in that the position of the template image is determined in one or more dimensions.

5. A system as defined in any one or more of the previous claims, characterized by a

computer interface to the X-ray apparatus, via which the presettings determined by simulation are transferred, whilst the X-ray apparatus permits the creation of a digital image only when these presettings apply.

- 5 6. A system as defined in any one or more of the previous claims, characterized by a computer interface, via which an existing digital image of the patient to be X-rayed is transferred to the first storage area.
- 10 7. A system as defined in any one or more of the previous claims, characterized in that a dental X-ray-unit is controlled.
- 15 8. A system as defined in any one or more of the previous claims, characterized in that the system is in the form of a PC controlled by software.
- 19 9. A template for specifying a digital X-ray sensor, characterized by the shape and size of an X-ray image created using the assigned digital X-ray sensor.
- 20 10. A template as defined in claim 9, characterized by a property making it possible to pass the template over an X-ray image.
- 25 11. A template as defined in claim 10, characterized by a digitally stored size and orientation which is adapted, when called on, in accordance with the actual dimensions of a digital X-ray image.
- 30 12. A template as defined in claim 10, characterized by a frame and/or by a transparent material.
13. A method of specifying and/or positioning a digital sensor of dental X-ray apparatus using templates corresponding in size and shape to the sensor image, comprising
 - a first step, in which the X-ray image is selected, this preferably being an X-ray image of the patient to be examined,

- a second step, during which the area to be imaged is specified,
- a third step, during which there is selected, from a plurality of templates each of which is assigned to sensors of the digital X-ray apparatus, that template which covers the area specified in the second step most precisely.

5 14. A method as defined in claim 13, characterized in that the third step is carried out automatically or interactively.

10 15. A method for specifying and/or positioning a digital sensor of dental X-ray apparatus, using templates corresponding in size and shape to the sensor image, comprising

- a first step, in which the X-ray image is selected, this preferably being an X-ray image of the patient to be examined,
- a second step, during which there is selected, from a plurality of templates each assigned to a sensor of the digital X-ray apparatus, that template which should be used to cover the area to be X-rayed,

15 20 - and a third step, during which the template is moved across the X-ray image for purposes of control and the imaging area appertaining to the template is thus revealed, the second and third steps being iteratively continued until a suitable combination of sensor and imaging area is displayed.

25 26 16. A method as defined in any one of claims 13 to 15, characterized in that the X-ray images and the templates are managed in digital form.

30 27 17. A method for creating a number of partial images using one or more sensors, characterized in that in a first step several areas to be X-rayed are selected from an image, and that in a second step there is effected automatic selection and display of the sensor suitable for creating the respective image.

28 29 18. A method as defined in claim 17, characterized in that the image is a digital pano-

ramic radiogram, which is preferably displayed on a digital display unit and preferably refers individually to the patient.

19. A method as defined in claim 17 or claim 18, characterized in that a suitable sequence for making the images is automatically proposed, account being taken of the particular conditions of the respective X-raying situation, namely the order of the images to be created, the operation of positioning the X-ray unit and/or the selection of a sensor type.
- 10 20. A data medium, containing a data structure that is capable of running on a computer to carry a method as defined in any one or more of the preceding method claims into effect.
21. Software as defined in any one or more of the preceding method claims.